Practical 5

Artificial Intelligence

EL3

19BCE248

AIM: To build a prolog for Query based on family tree

PROLOG code:

male(suryakant).

male(mayur).

male(mitul).

male(chintan).

male(dhruvil).

male(vatsal).

female(ramila).

female(falguni).

female(maya).

female(nami).

female(virti).

parent(suryakant,mayur).

parent(suryakant,mitul).

parent(ramila,mayur).

parent(mayur,chintan).

parent(mayur,virti).

parent(mayur,dhruvil).

parent(falguni,chintan).

parent(falguni,virti).

parent(falguni,dhruvil).

parent(mitul,vatsal).

parent(maya,vatsal).

husband(suryakant,ramila).

husband(mayur,falguni).

husband(mitul,maya).

husband(chintan,nami).

wife(ramila,suryakant).

wife(falguni,mayur).

wife(maya,mitul).

wife(nami,chintan).

mother(X,Y):- parent(X,Y),female(X).

father(X,Y):- parent(X,Y),male(X).

sister(X,Y):- parent(Z,X),parent(Z,Y),female(X),X\==Y.

brother(X,Y):-parent(Z,X),parent(Z,Y),male(X),X\==Y.

grandfather(X,Y):- parent(Z,Y),parent(X,Z),male(X),male(Z).

grandmother(X,Y):- parent(Z,Y),parent(X,Z),female(X),male(Z).

haschild(X):- parent(X,\_).

uncle(X,Z) :- brother(X,Y), parent(Y,Z).

father\_in\_law(X,Y):- husband(Z,Y),parent(X,Z),male(Z).

mother\_in\_law(X,Y):- husband(Z,Y),parent(X,Z),female(Z).

couple(X,Y):- husband(X,Y);wife(X,Y).

Output:

